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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,248	09/20/2001	Dominic W. Massaro	UC00-275-2	4329

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EXAMINER

KNEPPER, DAVID D

ART UNIT

PAPER NUMBER

2626

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/960,248	Applicant(s) MASSARO ET AL.	
	Examiner David D. Knepper	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 27-31 and 35-70 is/are rejected.
- 7) ☒ Claim(s) 5-26 and 32-34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3 sheets</u> . | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's correspondence filed on 27 Feb 2002 has been received and considered. Claims 1-70 are pending.

2. Applicant's IDS filed 27 Feb 2002 was considered. The French thesis was not translated for thorough translation because the applicant's statement indicates that it is limited to face and tongue. Nothing in this statement indicates particular relevance to applicant's invention.

Title

3. The title is objected to because it lacks technical accuracy and the use of consecutive prepositions "for in" is confusing. The background material indicates that the inventors recognize previous animated speech models are known but the title does not present material that the applicant discloses as the inventors', which, according to the disclosure, would be limited to the addition of breath images over previous computer animation displays. To the contrary, the title seems to better represent material recognized in the background as the work of others.

Priority Claims

4. The applicant(s) should check their filing receipts and/or the Patent Application Information Retrieval (PAIR) system for the acknowledgment of their **domestic** priority or benefit claims (if any) under 35 USC 119(e), 120 or 121 (37 CFR 1.78).

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Gasper (4,884,972).

As per claim 1, “modeling speech distinctions for a computer-animated talking head” is taught by Gasper’s speech synchronized animation, title:

“displaying a graphical representation of a selected voice characteristic of said speech segment at a position proximate to the face portion of said talking head” is clearly taught by his synchronized lip movements and other gestures, col. 4, lines 11-16 given the explanation leading up to this in col. 3 that explains that each sound is synchronized with particular visual images.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 3, 35- 38 are rejected under 35 U.S.C. § 103 as being unpatentable over Gasper (4,884,972).

Claim 2, 3, 36: “Modulating the color” and “said color... is responsive to voicing” is suggested by his use of color, col. 10, line 45.

Claim 35: See claims 2, 3 above. The term “modulating” here is broader than claims 2, 3 because it fail to indicate how the head is being changed so could read on any type of change that can be synchronized as taught by Gasper.

It is noted that Gasper does not explicitly use the terms “modulating”, “voicing”. However, he teaches that his synactor will allow changes to the display that constantly synchronize with the sounds (i.e.- phonemes). Since the sounds constantly change, it would have been obvious for a person having ordinary skill in the pertinent art, at the time the invention was made, that the various graphics, colors and other display elements are also changing because this is the only way for them to remain synchronized with voice sounds as taught by Gasper.

Claim 37: A “nose” portion is shown on all figures depicting a head.

Claim 38: Gasper (‘972) shows clearly that the mouth will modulate to be synchronized with sound (see figures 2a-2r).

9. Claims 4, 27-31, 39, 40-49 are rejected under 35 U.S.C. § 103 as being unpatentable over Gasper (4,884,972) in view of Gasper (5,613,056).

Claim 4, 47, 49, 50, 51: “displaying ... at a position proximal to the mouth portion” is suggested by Gasper (‘056) with his relative positions of lip, jaw, and tongue (col. 33, line 25) which are all items that have positions proximate to a mouth. Specifically, it would be obvious

to draw a tongue emanating from a mouth because it would be unnatural for a tongue to emanate from another portion of a head. Figure 11 also clearly shows teeth.

Claim 27: Displaying “a slidable element on a vertical bar” is obvious in view of fig 6 of Gasper ('056) showing common slide bars used in windows based selection tools. It would have been obvious to allow graphic adjustments using slide bars because such slide bars are common tools in windows based operating systems.

Claims 28, 30, 40, 44, 46: Changing pitch is shown in Fig. 7a Gasper of ('056). Pitch is by definition, the vibration of the glottis which is located in the throat. Pitch is an attribute of nasality and various phonemes are known by definition as nasals such as the “m” phoneme (fig. 11).

Claim 29, 31, 43: Figures 6, 7a and 8a all show a throat portion connected to the face image and some additional graphics at least 1 concentric circle around the throat.

Claim 39, 41, 42: changing the “nose portion” is obvious because Gasper ('056) shows various face clip art that can be chosen as well as the ability to resize (col. 4, lines 6-17).

Claim 45: eyebrows are shown in figures 7a, 8a of Gasper ('056).

Claim 48: Displaying “cutaway half-face view” is obvious because this is how the face in fig. 2 of Gasper ('972) is shown.

Claim 51: See claim 2 above.

10. Claims 52-70 are rejected under 35 U.S.C. § 103 as being unpatentable over Cosatto (5,995,119) in view of Shaw (6,147,692).

As per claim 52, “reshaping the canonical face” is taught or suggested by Cosatto:

“registering a target facial model” (his base face, col. 5, line 8);

“marking facial landmarks” (his parameterized facial parts, col. 5, line 12);

“warping said canonical face to that of said target facial model wherein said warping shifts the landmarks” (suggested by his generation of faces using visemes and warping, see figures 3, 4 and 5 - see Shaw who teaches specific modeling techniques in figures 10A and 10B, for example and the specific morphing from one face to another in figures 1, 2, 4, 5, 6 and 7 including the use of visemes, emotion and aging techniques).

It is noted that Cosatto does not teach specific “facial model”. However, he teaches that 3-D modeling is well known and that by saving an adequate number of facial expression patterns such as mouth shapes, he can reduce memory. Shaw also teaches that by saving a number of key facial measurements, memory can be saved. Shaw additionally teaches the use of polygonal modeling in figure 10 and 11. Therefore, it would have been obvious to save memory by utilizing key facial elements or measurements that can be modeled with particular polygons using warping techniques because Cosatto does not limit his system to any particular model and, although Shaw is also not limited, he shows using a particular model that can achieve a similar savings as Cosatto.

Claims 53-70 are rejected under similar arguments as applied to claim 52.

11. Claims 5-26 and 32-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art teaches that it is well known to draw any images desired to be synchronized with sound based on a number of face related images and elements (including backgrounds). However, the prior art does not teach a “particle-cloud” or “particle-stream” types of “image proximal to the face”.

Similarly, the prior art does not teach “concentric outline images proximal to the nose”...

Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Villa (4,177,589) is cited to show that it is well known to analyze speech in real time to affect 3-D animation that directly respond to particular phonemes so that a face appears to speak in a realistic manner.

13. Some correspondence may be submitted electronically. See the Office's Internet Web site <http://www.uspto.gov> for additional information.

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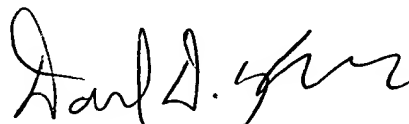
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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Knepper whose telephone number is (571) 272-7607. The examiner can normally be reached on Monday-Thursday from 07:30 a.m.-6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (571) 272-7602.

For the Group 2600 receptionist or customer service call (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) between the hours of 6 a.m. and midnight Monday through Friday EST, or by email at ebc@uspto.gov. For general information about the PAIR system, see <http://pair-direct.uspto.gov>.



David D. Knepper
Primary Examiner
Art Unit 2626
(previously AU 2654)
April 12, 2006